

FIG.1

[illegible]FIG. 4

MEMBER ID	CALL-RECEIVING TELEPHONE NUMBER	SIGNAL SOURCE INFORMATION	CONNECTION START/END TIME
11111	0120-1111-111	PUBLIC TELEPHONE	9:00~9:05
11111	0120-2222-222	045-111-1111	8:40~8:45
11111	0120-1111-111	CELLULAR TELEPHONE	8:10~8:15

FIG. 5

TERMINAL TYPE	BILLING RATE
CELLULAR TELEPHONE	20 YEN / MINUTE
PUBLIC TELEPHONE	30 YEN / MINUTE
REGULAR TELEPHONE	SEE TABLE BASED ON DISTANCE BETWEEN MA'S

FIG. 6

ACCESS POINT INFORMATION

ACCESS POINT	TELEPHONE NUMBER	LOCATION AREA
AP1	0120-1111-111	03 (TOKYO)
AP2	0120-2222-222	045 (YOKOHAMA)
AP3	0120-2222-222	078 (KOBE)

FIG. 7

CHARGE PATTERN IDENTIFICATION TABLE

MEMBER ID	CHARGE PATTERN	OTHER PARTY TO BE BILLED	OTHER INFORMATION
11111	PATTERN 1	NONE	NONE
22222	PATTERN 5	USER B	1000 YEN
33333	PATTERN 4	USER B	30%
44444	PATTERN 3	USER B	NONE
55555	PATTERN 2	NONE	NONE
66666	PATTERN 6	NONE	NONE
77777	PATTERN 7	NONE	80%
88888	PATTERN 8	USER B	80%

FIG. 8

$\frac{1}{\sqrt{2}} \begin{pmatrix} 1 & i \\ 0 & 1 \end{pmatrix}$ $\frac{1}{\sqrt{2}} \begin{pmatrix} 1 & -i \\ 0 & 1 \end{pmatrix}$ $\frac{1}{\sqrt{2}} \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$ $\frac{1}{\sqrt{2}} \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$

FIG. 9

MEMBER ID	FIXED AMOUNT SECTION	PER-UNIT SECTION
11111	3000 YEN UP TO 15 HOURS	15 YEN / MINUTE
22222	5000 YEN UP TO 50 HOURS	20 YEN / MINUTE
33333	NONE	10 YEN / MINUTE

FIG. 10

ITEMIZED USER CHARGE AMOUNT

USER ID: 11111	SIGNAL SOURCE	ACCESS POINT	TOTAL CONNECTION TIME	DATE OF SIGNAL TRANSMISSION	CHARGE AMOUNT
	090- (CELL)	TOKYO	2h	3/25-4/24	4000 YEN
	PUBLIC	YOKOHAMA	10m	4/23	300 YEN
	045-	KOBE	5m	4/24	300 YEN
	03-	TOKYO	5m	4/25	50 YEN
	078-	TOKYO	2m	4/26	500 YEN

FIG. 11

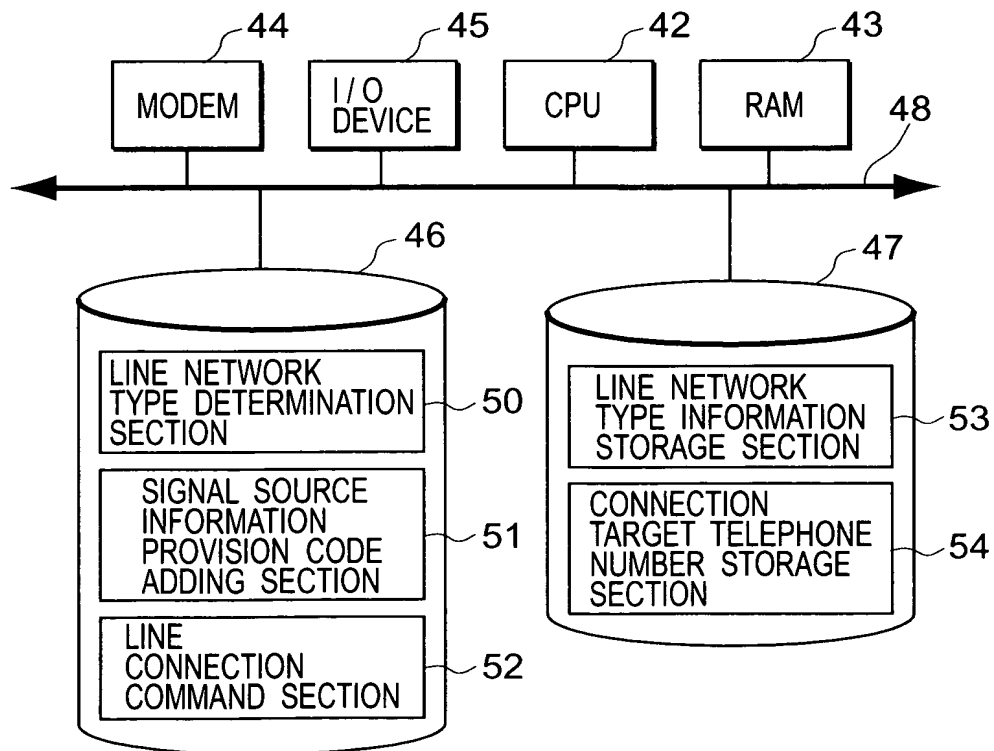


FIG. 12

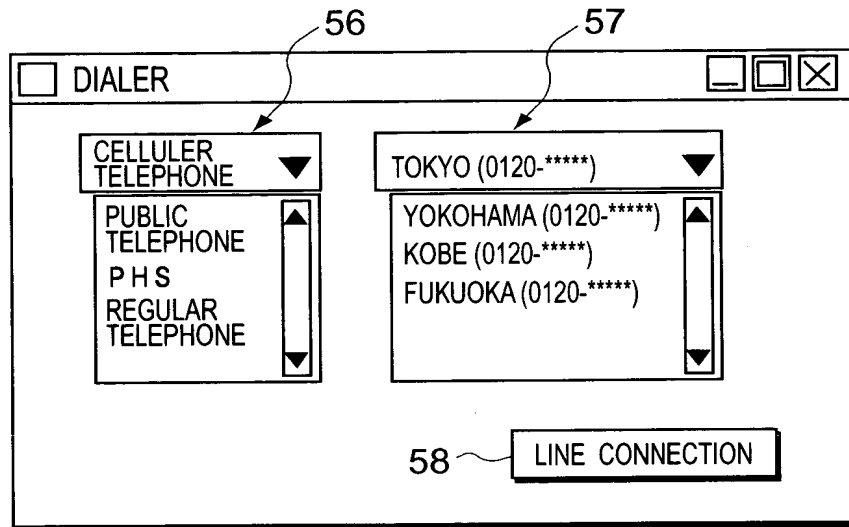
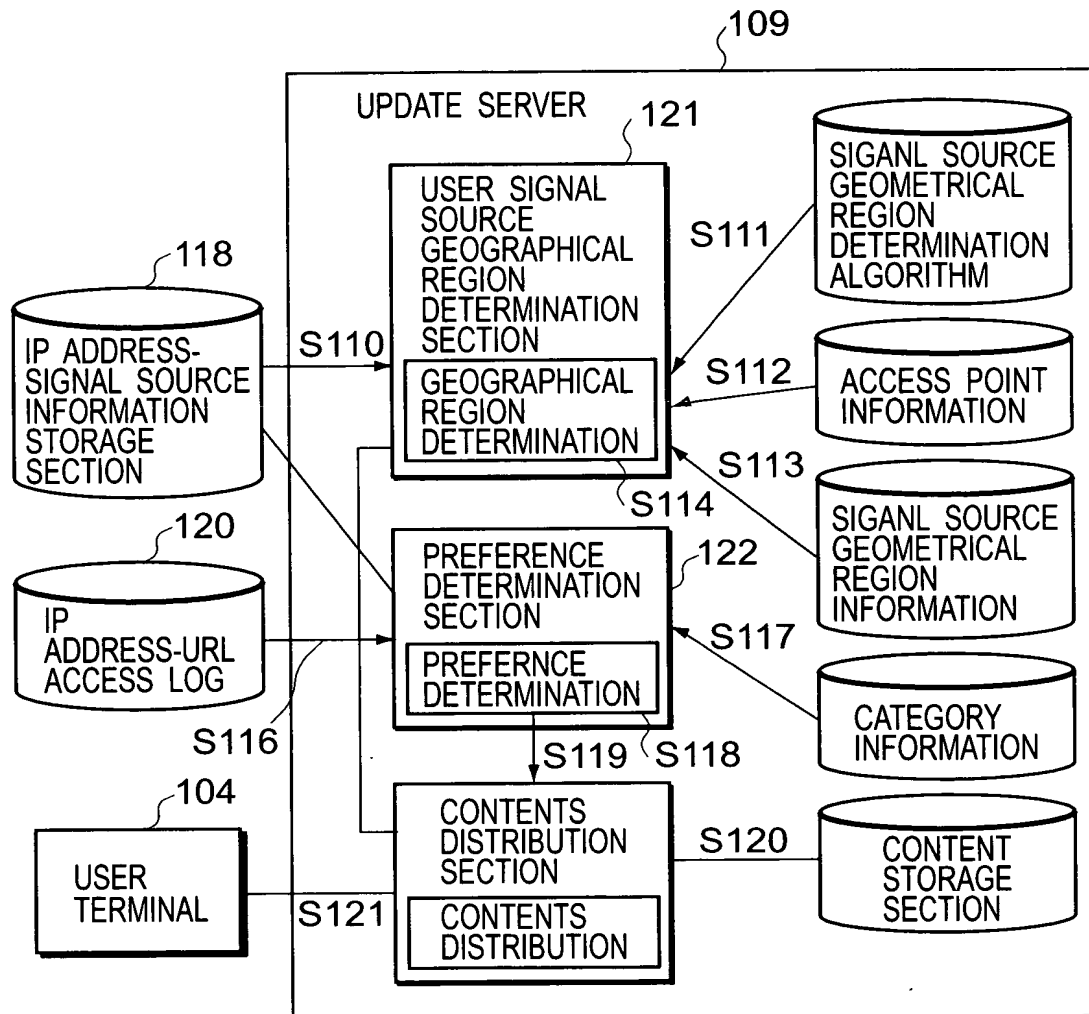


FIG. 13

ACCESS POINT INFORMATION

ACCESS POINT NAME	TELEPHONE NUMBER	LOCATION
AP1	03-111-1111	03 (TOKYO)
AP2	045-222-2222	045 (YOKOHAMA)
AP3	0120-3333-333	078 (KOBE)
.

FIG. 16



IP ADDRESS USAGE INFORMATION

USER	USER ID	IP ADDRESS	SIGANL SOURCE
A	1111	(IP 1)	045-222-2222
B	2222	(IP 2)	PUBLIC TELEPHONE
C	3333	(IP 3)	03-111-1111
.

FIG. 17

SIGANL SOURCE GEOMETRICAL REGION DETERMINATION ALGORITHM

LINE NETWORK TYPE	ALGORITHM
REGULAR TELEPHONE	DETERMINE BASED ON THE SIGNAL SOURCE AREA CODE
PUBLIC TELEPHONE	DETERMINE BASED ON THE ACCESS POINT AREA CODE
.

FIG. 18

SIGANL SOURCE GEOMETRICAL REGION INFORMATION

SIGNAL SOURCE OR ACCESS POINT AREA CODE AND EXCHANGE NUMBER	GEOMETRICAL REGION
045-222	YOKOHAMA-1
03-111	TOKYO-1
.

FIG. 19

09735343 434400

URL	CATEGORY
...	
URL 1	CATEGORY 1 (CARS)
...	
URL 2	CATEGORY 2 (TRAVEL)
...	
URL 3	CATEGORY 3 (SECURITIES)
...	

FIG. 20

REGISTERED SIGNAL SOURCE TELEPHONE NUMBER	USER	ID	PASSWORD	PARTY LIABLE FOR PAYMENT
03-1111-1111	USER A	11111	*****	USER A

FIG. 21A

REGISTERED SIGNAL SOURCE TELEPHONE NUMBER	USER	ID	PASSWORD	PARTY LIABLE FOR PAYMENT
03-1111-1111	USER A	11111	*****	USER A
03-1111-1111	USER B	22222	+++++++	USER B

FIG. 21B

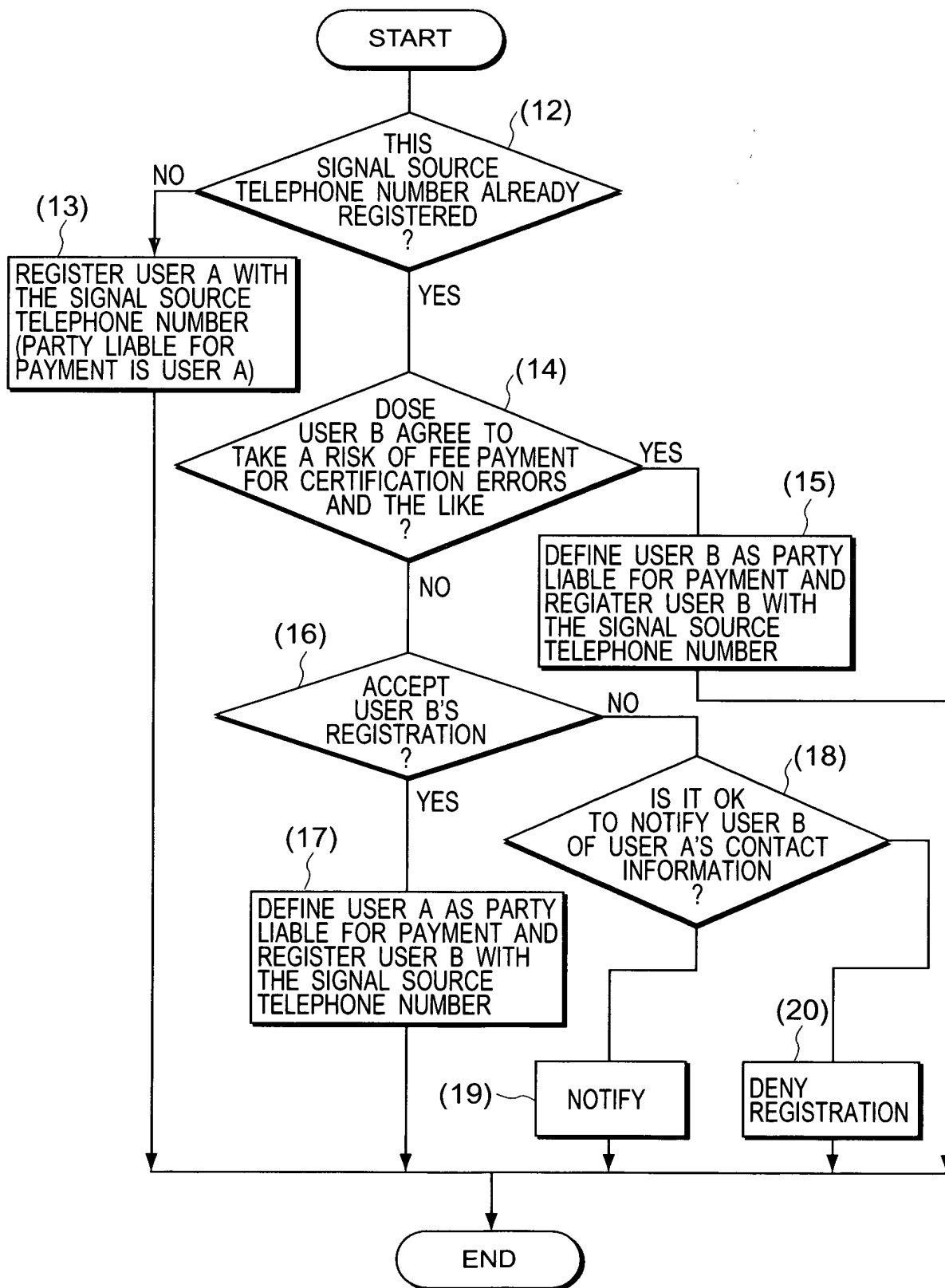


FIG. 22

Figure 6. The effect of the initial concentration of the monomer ($M_0 = 0.89 \text{ mol/L}$) at different temperatures on the polymerization rate.

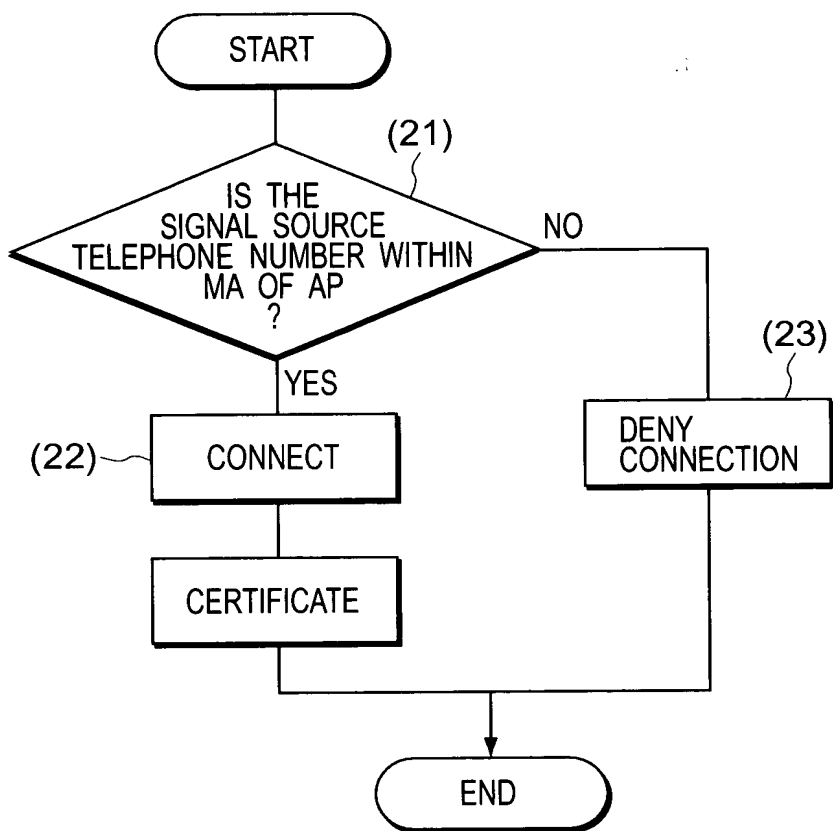


FIG. 23